



NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86-750-3770000 Fax:+86-750-3771111
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

Nata

Client:

LumCAT: LM01D03050AE

Luminaire:

Report No: GC2019091909

Voltage(V): 220.6000

Test No: NATA07

Current(A): 0.0180

LampCAT: CREE CXA1304

Power (W): 2.9900

Lamp flux(lm): 231.0

PF: 0.7300

Number of Lamps: 1

Ballast type: AC

Length(mm): 30

Width(mm): 30

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 195.52, Efficiency(%): 84.64% , Luminous Efficacy(lm/W): 65.39

Central intensity(cd): 189.581, Maximum intensity(cd): 189.581

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=51.2

[C90/270]Total=51.2

Field angle(10%Imax): [C0/180]Total=102.6

[C90/270]Total=102.6

Maximum s/h(1/2): C0_180=0.79 C90_270=0.79

Maximum s/h(1/4): C0_180=0.82 C90_270=0.82

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 84.64%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 89.139%

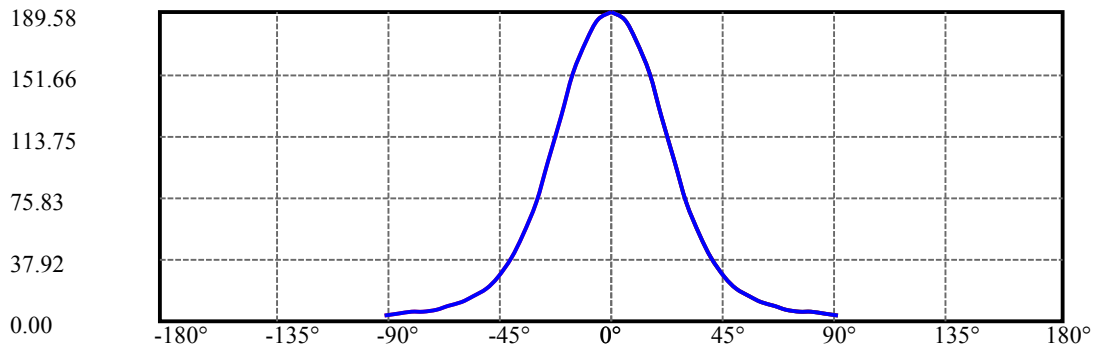
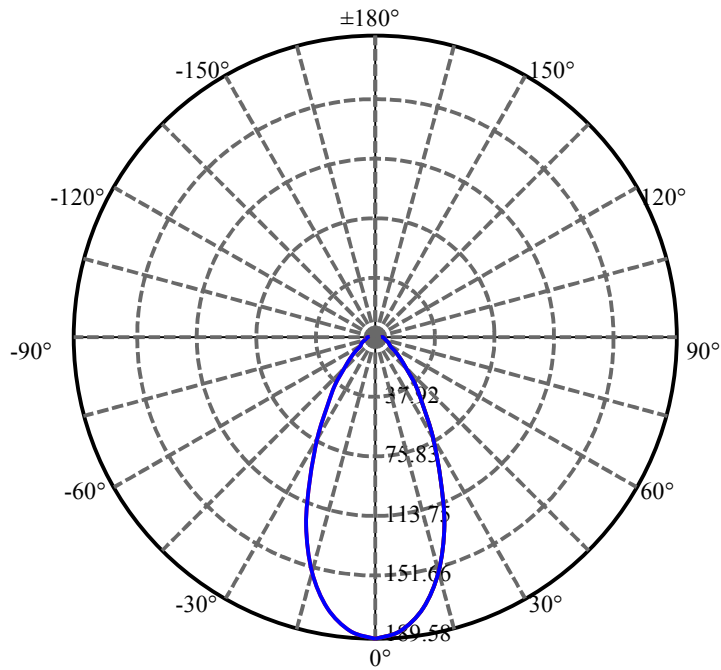
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	189.581	0.000	0	.000%	.000%
5.0	185.376	4.482	4.482	1.940%	2.293%
10.0	172.406	12.799	17.281	5.541%	8.839%
15.0	152.041	19.246	36.527	8.332%	18.683%
20.0	126.240	22.934	59.462	9.928%	30.413%
25.0	98.021	23.521	82.983	10.182%	42.443%
30.0	73.033	21.647	104.63	9.371%	53.515%
35.0	52.824	18.533	123.163	8.023%	62.994%
40.0	38.666	15.264	138.427	6.608%	70.801%
45.0	27.645	12.278	150.705	5.315%	77.081%
50.0	20.284	9.685	160.39	4.193%	82.035%
55.0	15.116	7.697	168.087	3.332%	85.971%
60.0	11.676	6.193	174.28	2.681%	89.139%
65.0	9.286	5.096	179.376	2.206%	91.745%
70.0	7.471	4.243	183.619	1.837%	93.916%
75.0	6.317	3.604	187.223	1.560%	95.759%
80.0	5.545	3.174	190.397	1.374%	97.382%
85.0	4.623	2.763	193.16	1.196%	98.795%
90.0	3.979	2.355	195.515	1.020%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	104.63	45.29%	53.51%
0-40	138.43	59.93%	70.80%
0-60	174.28	75.45%	89.14%
0-90	193.16	83.62%	98.80%
0-120	193.16	83.62%	98.80%
0-180	195.52	84.64%	100.00%
60-90	25.07	10.85%	12.82%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-47.95	156.41	67.71%	80.00%

ZONAL LUMEN SUMMARY

0-10	17.28
10-20	42.18
20-30	45.17
30-40	33.80
40-50	21.96
50-60	13.89
60-70	9.34
70-80	6.78
80-90	2.76
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



C0(Max): —————

C0/C180: —————

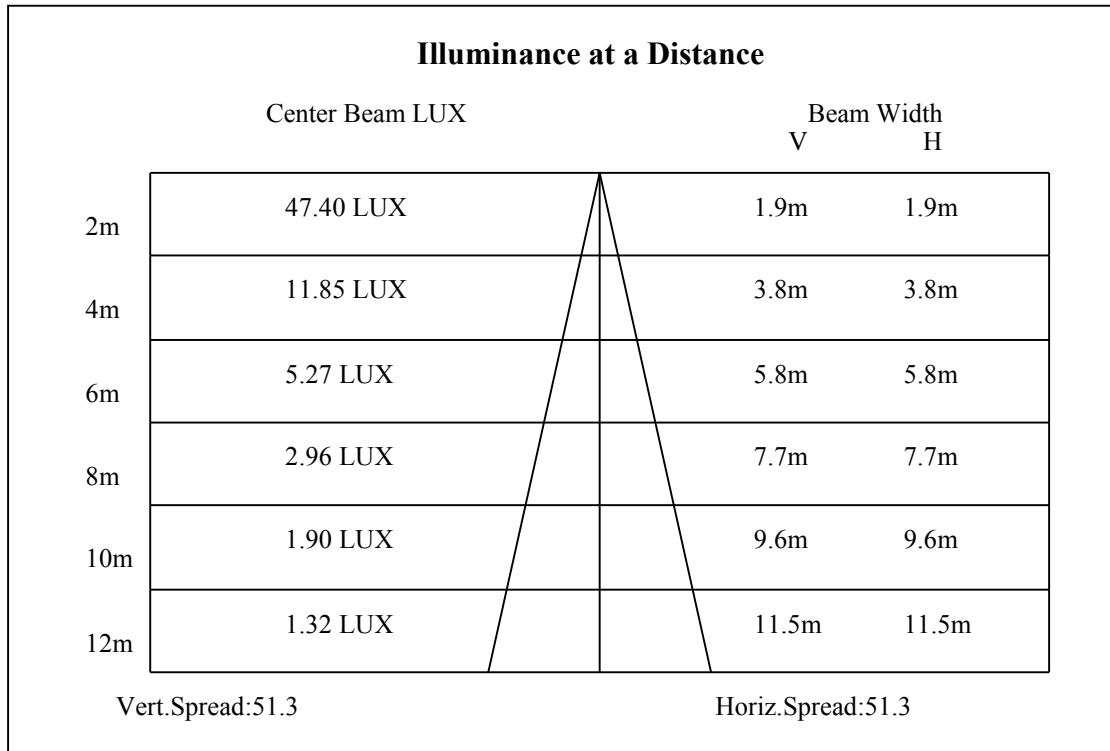
C90/C270: —————

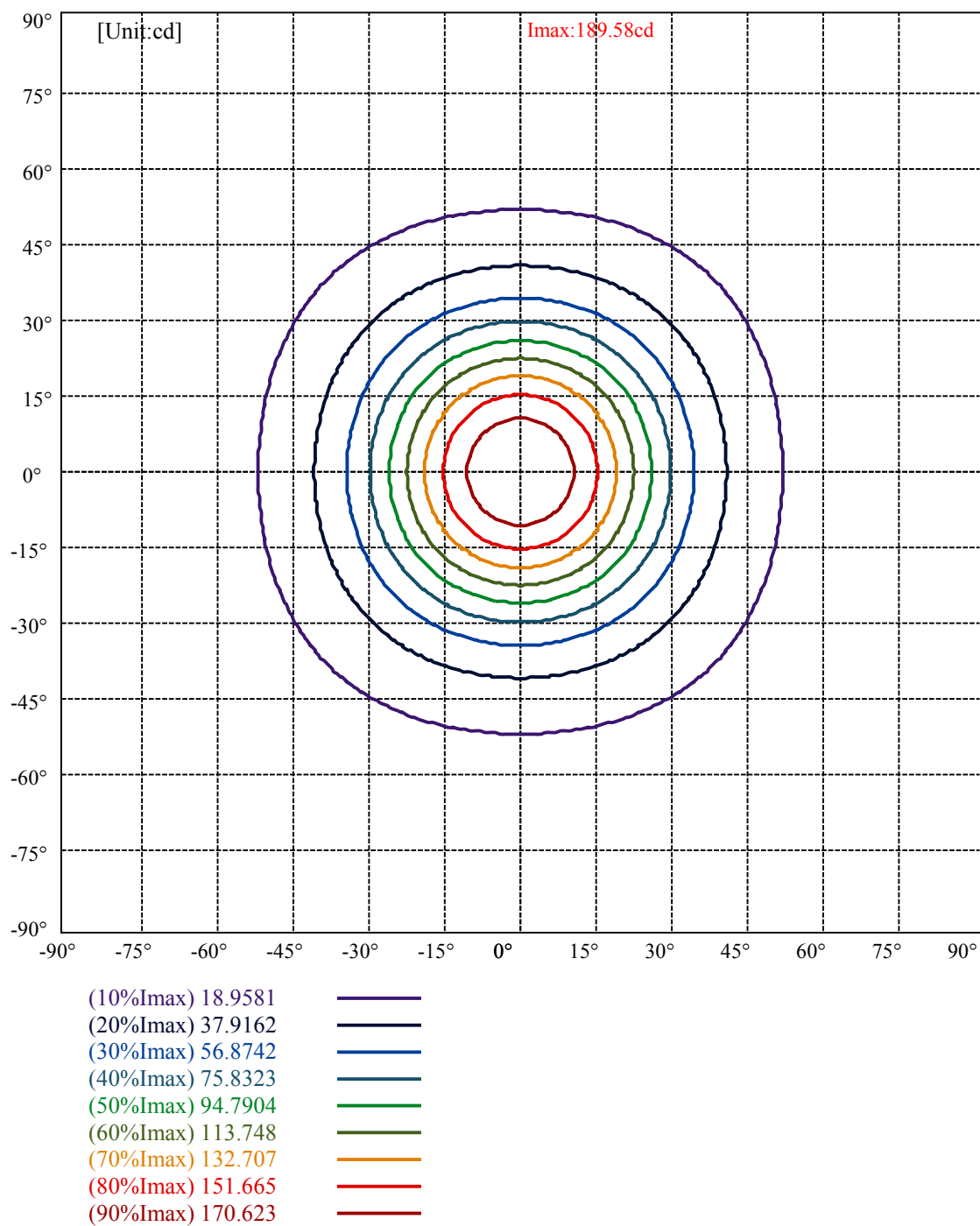
Field angle(10%Imax):C0/180Left:51.3 Right:51.3

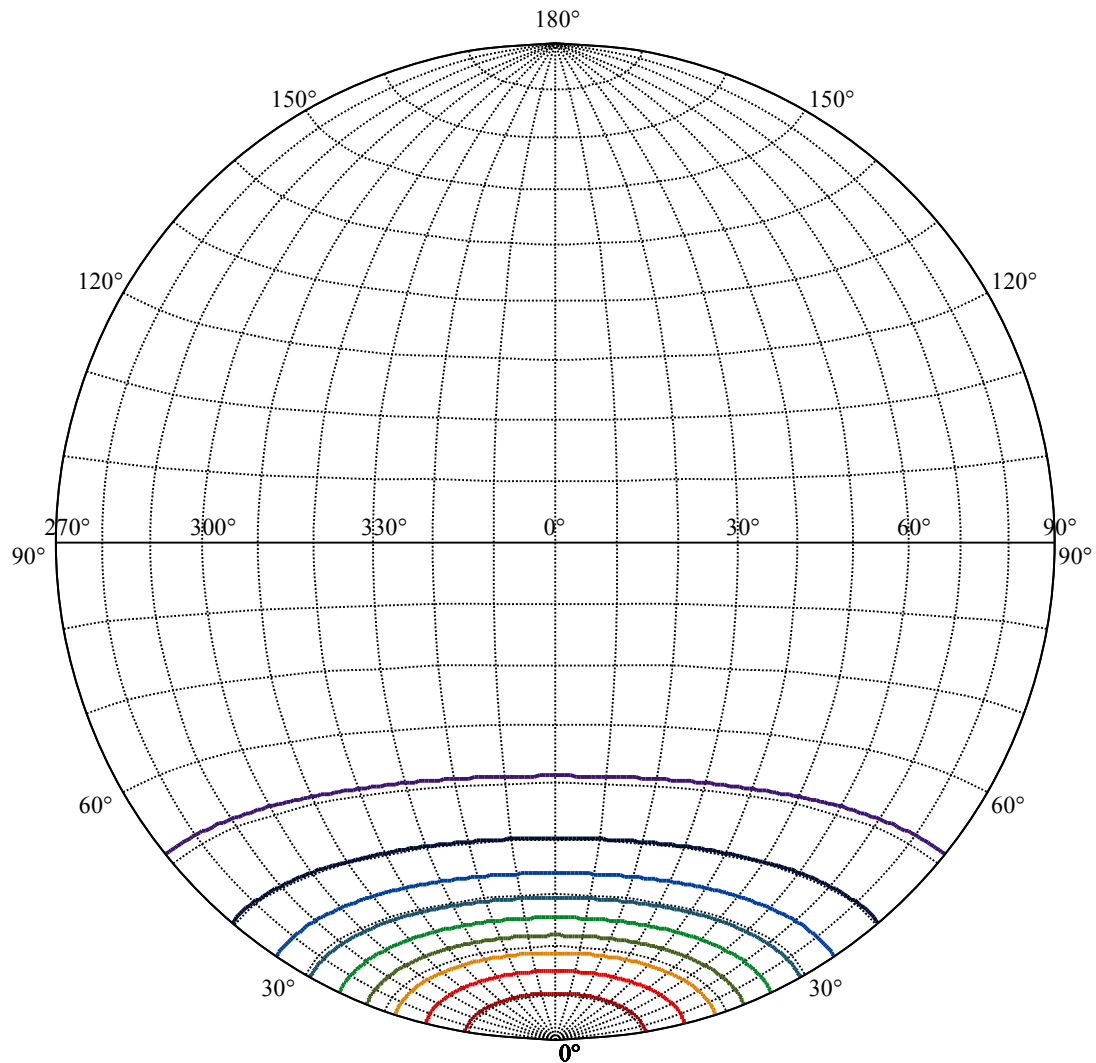
:C90/270Left:51.3 Right:51.3

Beam Angle(50%Imax):C0/180Left:25.6 Right:25.6

:C90/270Left:25.6 Right:25.6







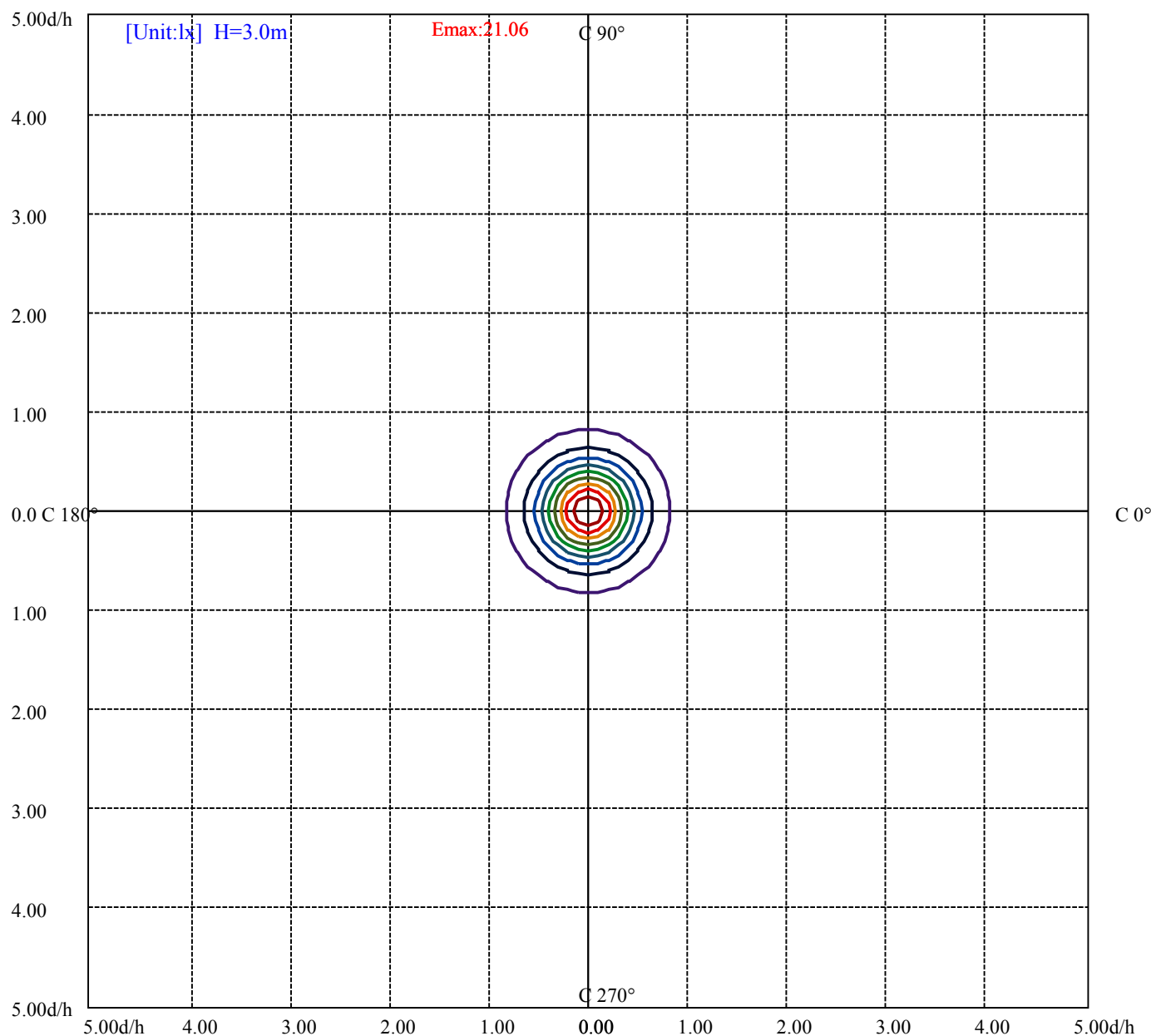
House

[Unit:cd]

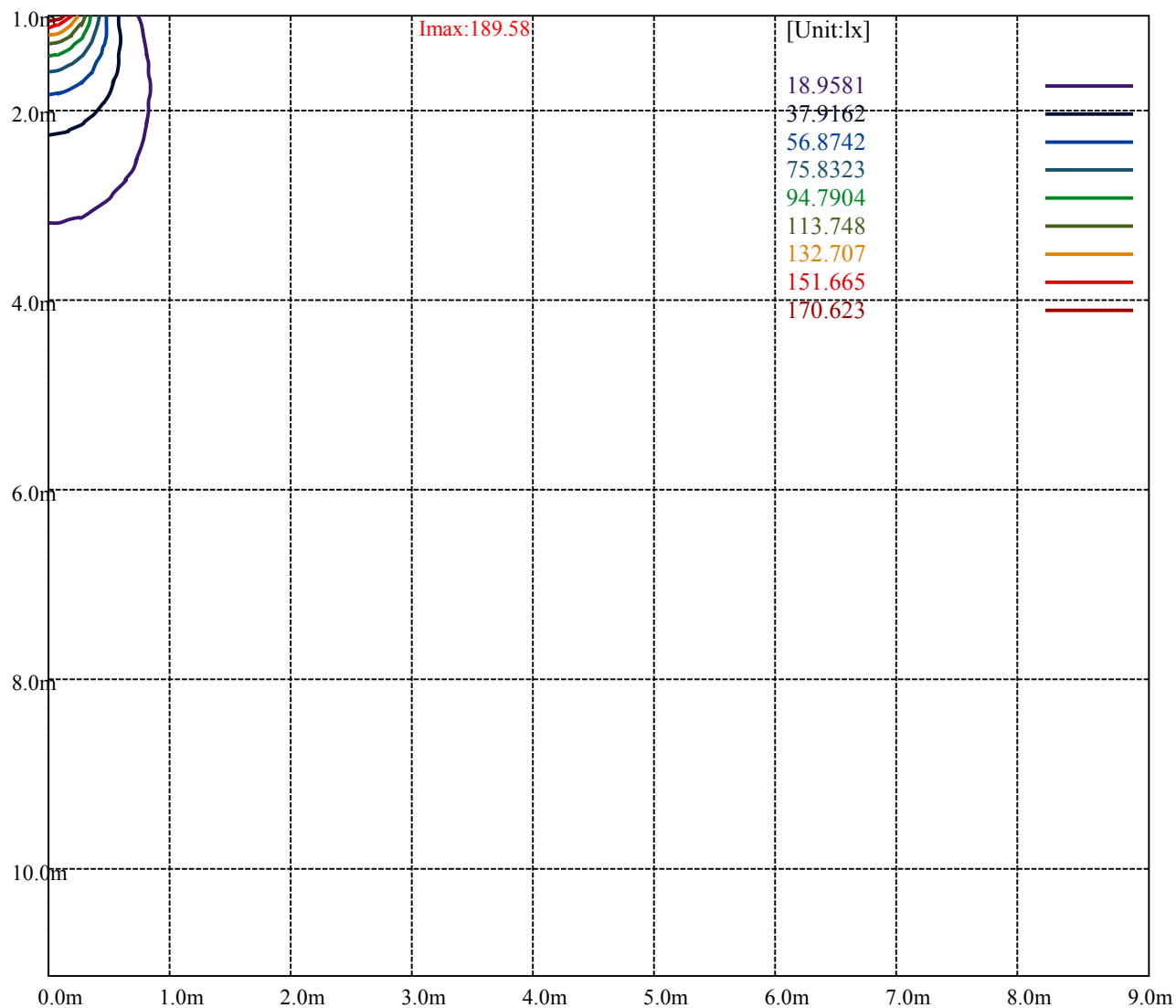
Road

Imax:189.58

(10%Imax)	18.9581	—
(20%Imax)	37.9162	—
(30%Imax)	56.8742	—
(40%Imax)	75.8323	—
(50%Imax)	94.7904	—
(60%Imax)	113.748	—
(70%Imax)	132.707	—
(80%Imax)	151.665	—
(90%Imax)	170.623	—



(10%Emax) 2.106456	—
(20%Emax) 4.2129	—
(30%Emax) 6.319355	—
(40%Emax) 8.425811	—
(50%Emax) 10.53227	—
(60%Emax) 12.63867	—
(70%Emax) 14.74511	—
(80%Emax) 16.85167	—
(90%Emax) 18.95811	—



Luminance Table

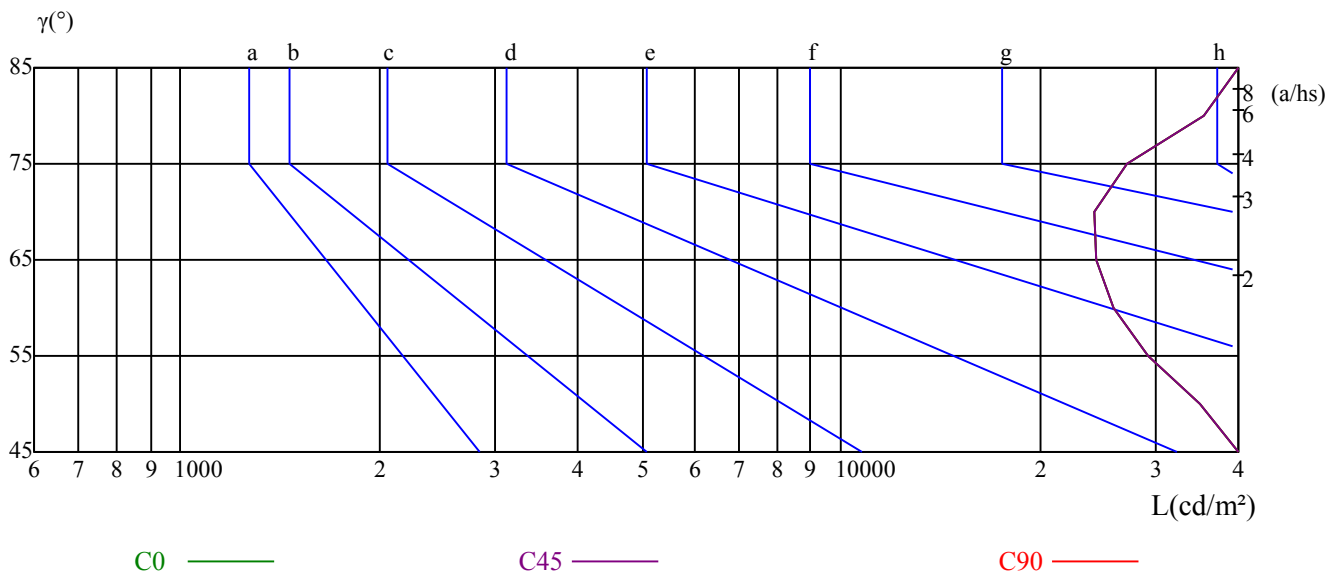
γ	45	50	55	60	65	70	75	80	85
C0	43440	35063	29282	25947	24415	24271	27117	35482	58936
C45	43440	35063	29282	25947	24415	24271	27117	35482	58936
C90	43440	35063	29282	25947	24415	24271	27117	35482	58936

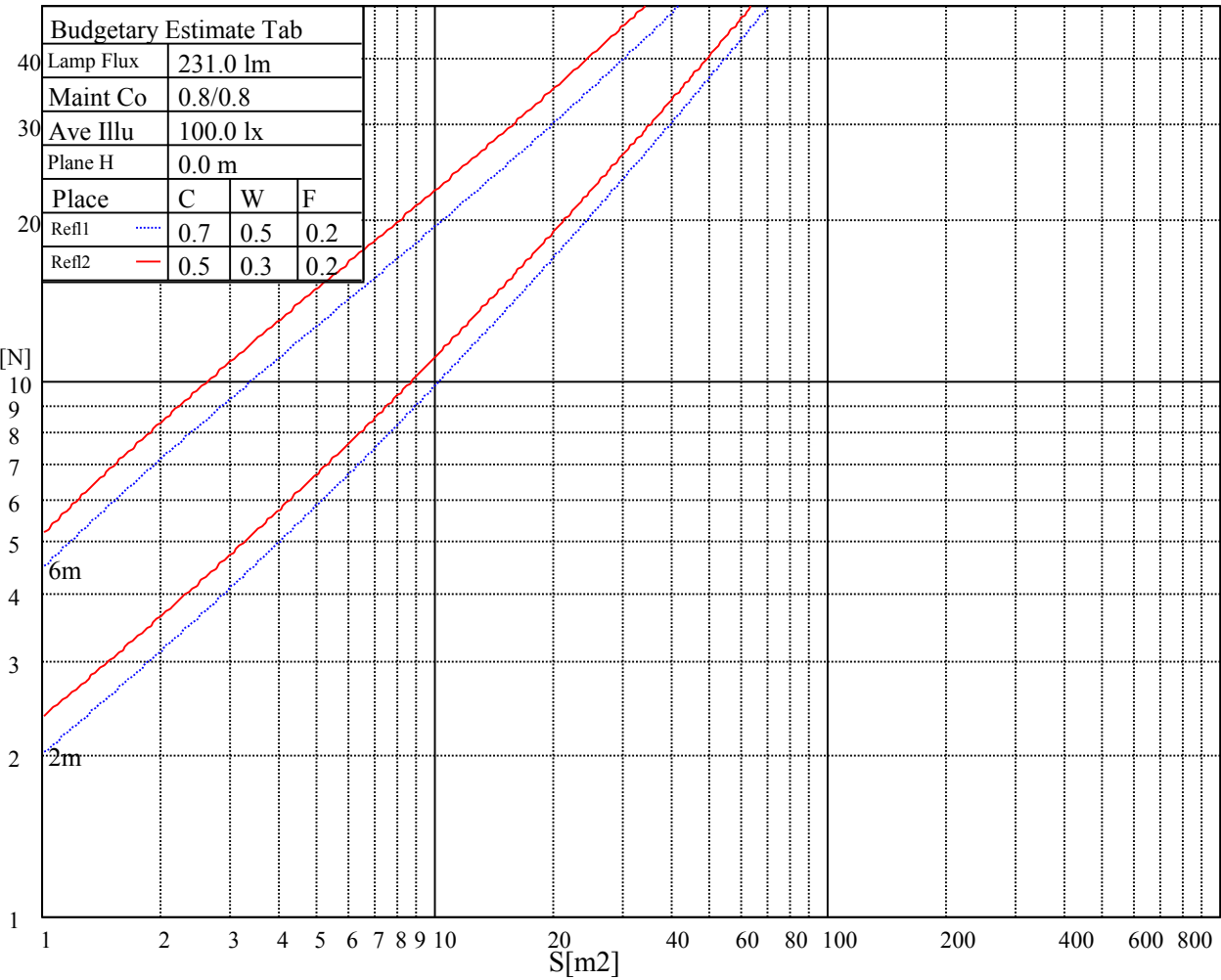
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
24415	24415	24415	27117	27117	27117	58936	58936	58936

Glare Table

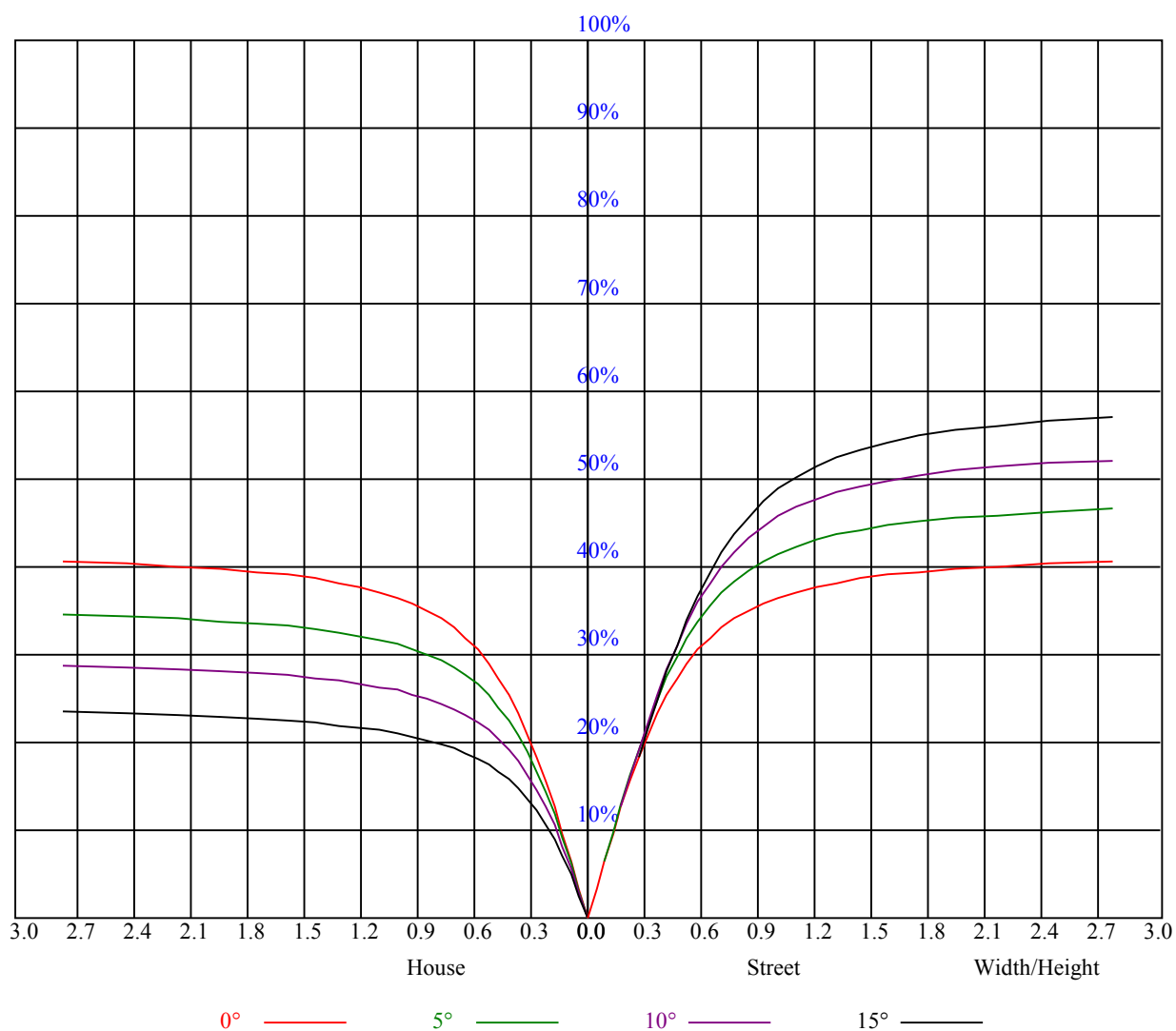
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

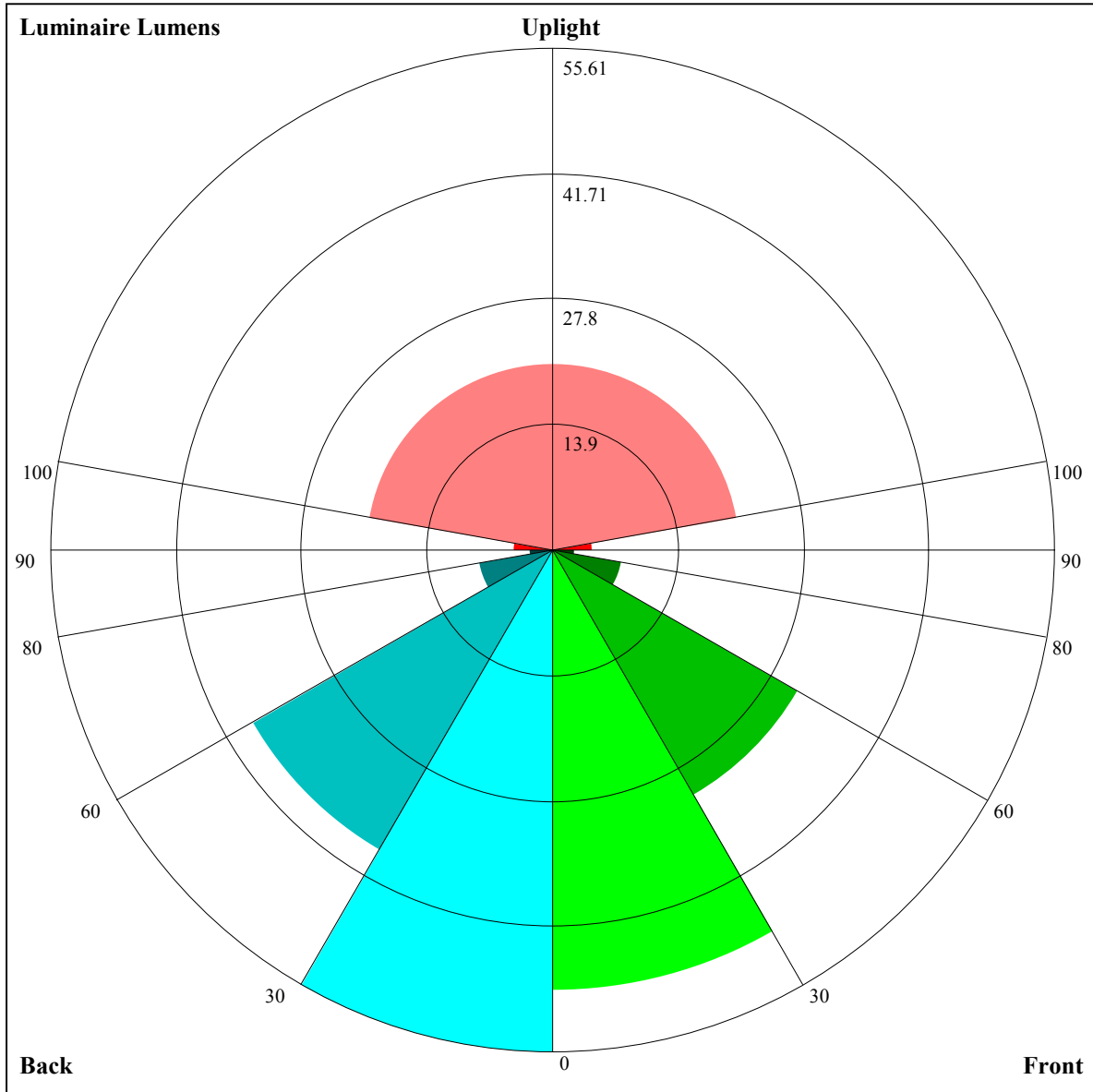
Luminance Limiting Curve





RHOC	80			70			50			30			10			0
RHOW	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	COEFFICIENTS OF UTILIZATION RHOFC=20 CU															
0	1.01	1.01	1.01	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.86	0.86	0.86	0.85
1	0.91	0.88	0.85	0.89	0.86	0.84	0.85	0.83	0.81	0.82	0.80	0.78	0.79	0.77	0.76	0.75
2	0.82	0.77	0.74	0.81	0.76	0.73	0.78	0.74	0.71	0.75	0.72	0.70	0.73	0.70	0.68	0.66
3	0.75	0.69	0.65	0.74	0.69	0.65	0.71	0.67	0.63	0.69	0.65	0.62	0.67	0.64	0.61	0.60
4	0.69	0.63	0.58	0.68	0.62	0.58	0.66	0.61	0.57	0.64	0.60	0.57	0.62	0.59	0.56	0.54
5	0.63	0.57	0.53	0.63	0.57	0.53	0.61	0.56	0.52	0.59	0.55	0.52	0.58	0.54	0.51	0.50
6	0.59	0.53	0.48	0.58	0.52	0.48	0.57	0.52	0.48	0.55	0.51	0.47	0.54	0.50	0.47	0.46
7	0.55	0.49	0.44	0.54	0.48	0.44	0.53	0.48	0.44	0.52	0.47	0.44	0.51	0.47	0.44	0.42
8	0.51	0.45	0.41	0.51	0.45	0.41	0.50	0.45	0.41	0.49	0.44	0.41	0.48	0.44	0.41	0.39
9	0.48	0.42	0.38	0.48	0.42	0.38	0.47	0.42	0.38	0.46	0.41	0.38	0.45	0.41	0.38	0.37
10	0.45	0.40	0.36	0.45	0.39	0.36	0.44	0.39	0.36	0.43	0.39	0.36	0.43	0.38	0.35	0.34





Luminaire Lumens:

FL=48.89,FM=31.34,FH=7.81,FVH=2.46

BL=55.61,BM=38.4,BH=8.35,BVH=2.69

UL=4.34,UH=20.66

BUG Rating:B0-U2-G0

Intensity data(cd)										Appendix Page: 15 Total:15	
C/ γ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	189.05	177.59	156.19	130.49	102.04	74.38	54.38	39.12	28.82		
45.0	191.23	182.74	165.43	138.89	109.84	84.36	57.49	42.97	31.23		
90.0	188.35	179.21	161.99	137.12	106.59	80.00	55.96	40.42	30.25		
135.0	189.70	187.28	176.15	156.70	134.43	102.13	78.38	56.89	41.35		
180.0	189.05	190.67	183.99	168.21	146.77	118.93	91.88	67.75	50.53		
225.0	191.23	191.51	183.43	168.63	141.86	116.01	87.84	62.09	44.92		
270.0	188.35	191.14	185.98	172.81	149.74	121.95	93.04	66.03	47.98		
315.0	189.70	182.88	166.08	143.48	118.65	86.40	65.29	47.33	34.25		
360.0	189.05	177.59	156.19	130.49	102.04	74.38	54.38	39.12	28.82		
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	22.09	16.84	12.53	10.21	8.12	6.82	8.03	8.45	3.90		
45.0	22.00	15.96	11.88	9.47	7.66	6.40	5.20	4.45	3.85		
90.0	21.11	16.19	12.16	9.70	7.56	6.22	5.20	4.73	4.41		
135.0	29.19	21.16	15.73	11.65	9.79	7.66	6.13	5.01	4.50		
180.0	34.29	25.52	18.56	13.64	10.67	8.68	7.19	5.89	7.19		
225.0	32.30	22.97	16.84	12.85	9.42	7.42	5.94	4.97	4.27		
270.0	35.78	25.43	19.54	14.90	11.79	9.19	7.15	5.75	4.97		
315.0	24.41	18.19	13.69	11.00	9.28	7.38	5.71	5.10	3.90		
360.0	22.09	16.84	12.53	10.21	8.12	6.82	8.03	8.45	3.90		
C/ γ (°)	90.0										
0.0	3.25										
45.0	3.71										
90.0	5.01										
135.0	4.27										
180.0	3.94										
225.0	3.90										
270.0	4.41										
315.0	3.34										
360.0	3.25										